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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,261	09/26/2001	Shinichi Morimoto	P/1929-85	8415

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EXAMINER

SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,261

Applicant(s)

MORIMOTO, SHINICHI

Examiner

Michael J. Simitoski

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The response of 9/14/2005 was received and considered.
2. Claims 1-10 are pending.

Response to Arguments

3. Applicant's arguments filed 9/14/2005 have been fully considered but they are not persuasive.
4. Applicant's response (p. 9, ¶3) argues that Cropper does not transmit the packet received from the interface portion to the predetermined server when the terminal has not been authenticated for the LAN. However, Cropper receives a packet from a mobile station at an HLR of a home network and searches for subscriber data (col. 5, lines 1-11). If not found, a VLR of the home network is searched (col. 5, lines 12-18) (the request is transmitted to the VLR). If either the HLR or the VLR of the home network contains the subscriber data and the data is authenticated, then the MS will communicate with the home network. Therefore, the packet is transmitted to a predetermined server or network connected device (VLR) if it is not authenticated. Further, when the subscriber data is found in another network's HLR, it is transmitted to the requesting networks HLR/VLR/ISR (see Fig. 6, data flow 5). Copper explicitly discloses the instance in which the HLR, VLR and ISR are provided on separate platforms and not integrated (col. 7, lines 19-27).
5. Applicant's response (p. 10, ¶2-3) argues that Jones does not teach a packet received from an interface portion transmitted to the predetermined server or network connected device when the contents of the first packet distributing table represent that the terminal has not been

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authenticated. However, Jones is cited for teaching authenticating the data and if it is not authenticated, transferring the data to a registration server. Decasper teaches that when examining incoming data, it is faster to store examination results in a cache so as to quickly evaluate similar packets. Therefore, Jones, as modified by Decasper, teaches checking a packet distributing table to determine if the packet has yet been authenticated.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2 & 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,819,178 to **Cropper**.

Regarding claims 1 & 5, Cropper discloses a base station/MS,HLR,VLR,ISR (Fig. 4, #113,121,130) comprising an interface portion (Fig. 6, #112) for making a communication with a terminal station/MS (Fig. 6, #500) and extracting authentication request information/call request and a reception/registration packet therefrom (col. 4, lines 35-65), a first authentication managing portion/HLR for determining whether or not to authenticate said terminal station for said LAN/Visited network (Fig. 6, #100) corresponding to said authentication request information/call request received from said interface portion (Fig. 3A & col. 4, lines 35-57) and setting a result of the determination (Fig. 3C) to a first packet distributing table/HLR (Fig. 6, #130) and a first packet distributing portion/HLR (Fig. 6, #130) for referencing registered

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contents of said first packet distributing table/HLR (Fig. 6, #130) for the packet received from said interface portion (col. 5, lines 12-18), transferring the packet received from said interface portion to said LAN/Visited network (Fig. 6, #100) when said contents of said first packet distributing table represent that said terminal station has been authenticated for said LAN (HLR or VLR authenticates MS, completing registration) (Fig. 3A), and transmitting the packet received from said interface portion to said predetermined server or network-connected device/VLR (Fig. 6, #430 & col. 5, lines 35-41) when said contents of said first packet distributing table represent that said terminal station has not been authenticated for said LAN (Fig. 3B, process A, col. 5, lines 19-23 & lines 35-40).

Regarding claim 2 & 6, Cropper discloses a second authentication managing portion/ISR (Fig. 6, #130), a second packet distributing portion/ISR (Fig. 6, #130) and a second packet distributing table/ISR (Fig. 6, #130) for storing a plurality of destinations/addresses, wherein said second authentication managing portion/ISR is configured for determining whether or not to authenticate said terminal station/MS (Fig. 6, #500 & col. 5, lines 19-23) corresponding to said authentication request information and setting a result of the concerned determination to said second packet distributing portion/ISR (col. 5, lines 19-23, Fig. 3C, process C & Fig. 6, #130) when the result of the determination of said first authentication managing portion represents that said terminal station has not been authenticated for said LAN/Visited network (Fig. 6, #100), wherein said first packet distributing portion/VLR (Fig. 6, #130) is configured for transferring the packet received from said terminal station/MS (Fig. 6, #500) to said second packet distributing portion/ISR (col. 5, lines 12-23 & Fig. 6, #130) when said registered contents/subscriber data of said first packet distributing table/VLR (Fig. 6, #130) represent that

said terminal station has not been authenticated for said LAN/Visited network (Fig. 6, #100), and wherein said second packet distributing portion/ISR (Fig. 6, #130) is configured for referencing the registered contents of said second packet distributing table/ISR (Fig. 6, #130) for the packet received from said first packet distributing portion/VLR (col. 5, lines 12-23 & Fig. 6, #130) and transmitting the packet received from said terminal station to an appropriate server or network-connected device/Home HLR (Fig. 6, #430) corresponding to a destination/address to which the packet is distributed (col. 5, lines 19-23 & lines 35-40).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3, 5 & 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,873,609 to Jones et al. (**Jones**) in view of "Router Plugins: A Software Architecture for Next Generation Routers" by Decasper et al. (**Decasper**). Jones discloses a base station/access operator RADIUS authentication server (col. 3, lines 20-37) including an interface portion for making a communication with a terminal station/PC and extracting authentication request information/new user and a reception packet/new user therefrom (col. 3, lines 20-37), a first authentication managing portion/RADIUS for determining whether or not to authenticate said terminal station for a LAN/managed IP network (Fig. 1, #31) corresponding to said authentication request information received from said interface portion, transferring the packet

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received from said interface portion to said LAN/managed IP (col. 3, lines 20-37) when said terminal station has been authenticated for said LAN, and transmitting the packet received from said interface portion to said predetermined server or network-connected device/Access Operators registration server (col. 3, lines 20-37) when said terminal station has not been authenticated for said LAN (col. 3, lines 20-37). Jones lacks setting a result of the determination to a first packet distributing table and a first packet distributing portion for referencing registered contents of said first packet distributing table for the packet received from said interface portion and consulting the first packet distributing table for terminal authentication. However, Decasper teaches that high performance is achieved in a network decision device by storing the result of a determination in a cache and consulting the cache for result rather than the re-examining/authenticating (§3, ¶6 & P. 5, ¶2). By doing so, rather than authenticating each of Jones's packets, if the determination that the packet has been authenticated or denied authentication by the registration server, the cache is updated with the result and consulted. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set a result of the determination to a first packet distributing table/cache and to include a first packet distributing portion for referencing registered contents of said first packet distributing table/cache for the packet/new user received from said interface portion and consulting the first packet distributing table/cache for terminal authentication. One of ordinary skill in the art would have been motivated to perform such a modification to achieve high performance, as taught by Decasper (§3, ¶6 & P. 5, ¶2).

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10. Claims 3-4 & 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cropper**, as applied to claims 1-2 & 5-7 above, in further view of U.S. Patent 6,397,056 to Bugnon et al. (**Bugnon**). Cropper lacks issuing an authentication request to an inner LAN authentication server and setting a response to the authentication request in the packet distribution table. However, Bugnon teaches that in order to reduce fraud in radio telecommunications networks, networks include an authentication center, which is normally co-located with the HLR (col. 1, lines 27-30). Each subscriber has an authentication key, which is used to authenticate the mobile terminal (col. 1, lines 31-45, col. 2, lines 47-64 & Fig. 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cropper to issue an authentication request to an inner LAN authentication server and setting a response to the authentication request in the packet distribution table, instead of using plaintext identifiers. One of ordinary skill in the art would have been motivated to perform such a modification to reduce fraud in radio telecommunications networks, as taught by Bugnon (col. 1, lines 31-45, col. 2, lines 47-64 & Fig. 5).

11. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cropper** in view of U.S. Patent 6,606,491 to **Peck**. Cropper discloses a system, as described above, but lacks explicitly registering a refusal in the packet distributing table if the terminal station has not been authenticated. However, Peck teaches that in mobile telecommunications systems, it is known to check a blacklist of mobile numbers when authenticating to deny access not only if the terminal is not authenticated, but also if the terminal is a stolen terminal (col. 1, lines 36-46, lines 50-54, lines 58-65, col. 5, lines 4-7 & col. 8, lines 15-17). Therefore, it would have been obvious

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to one having ordinary skill in the art at the time the invention was made to modify Cropper to explicitly register an authentication refusal/blacklisted mobile terminal in the packet distributing table. One of ordinary skill in the art would have been motivated to perform such a modification to deny access if the terminal is a stolen terminal, as taught by Peck (col. 1, lines 36-46, lines 50-54, lines 58-65, col. 5, lines 4-7 & col. 8, lines 15-17).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m. – 3:15 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached at (571) 272-3838.

Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:


(571) 273-8300
(for formal communications intended for entry)

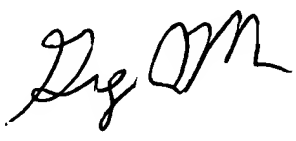
Or:

(571) 273-3841 (Examiner's fax, for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MJS
October 31, 2005


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